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Numerical solving of problem of diffusion of low-molecular solvent in polymer materials with the moving interface

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Abstract

Mathematical model is applied which allows to numerically solve problem of extraction of low-molecular solvent from spherical polymer products. Taking into account shrinkage is provided. The numerical solving is based on transition from the variable region to fixed one and on the use of difference scheme of special kind. This scheme has been developed for equation of convective diffusion. In this equation, convective and diffusion terms become zero in the course of time.